

## ABSTRACT OF THE DISCLOSURE

A method of making a highly sensitive epitaxial germanium low temperature sensor that is superior in the method of production and performance than those currently available. The geometry and sensitivity of the sensor can be tuned to desired temperature ranges, and specifically can operate at cryogenic temperatures. The sensor can be manufactured uniformly and reproducibly in large quantities at relatively low cost in which large area arrays are possible. The applications of the sensors range from conventional low temperature thermometry and control in laboratory and industrial settings, to applications associated with infrared, x-ray, particle and plasma physics and spectroscopy.